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# WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with  
COLORADO AGRICULTURAL EXPERIMENT STATION  
STATE ENGINEER of COLORADO  
and STATE ENGINEER of NEW MEXICO

Data included in this report were obtained by the agencies named above in cooperation with the Bureau of Reclamation, U.S. Forest Service, National Park Service, Corps of Engineers and other Federal, State and private organizations.

AS OF  
APR. 1, 1971

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO**

and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**

*Issued by*

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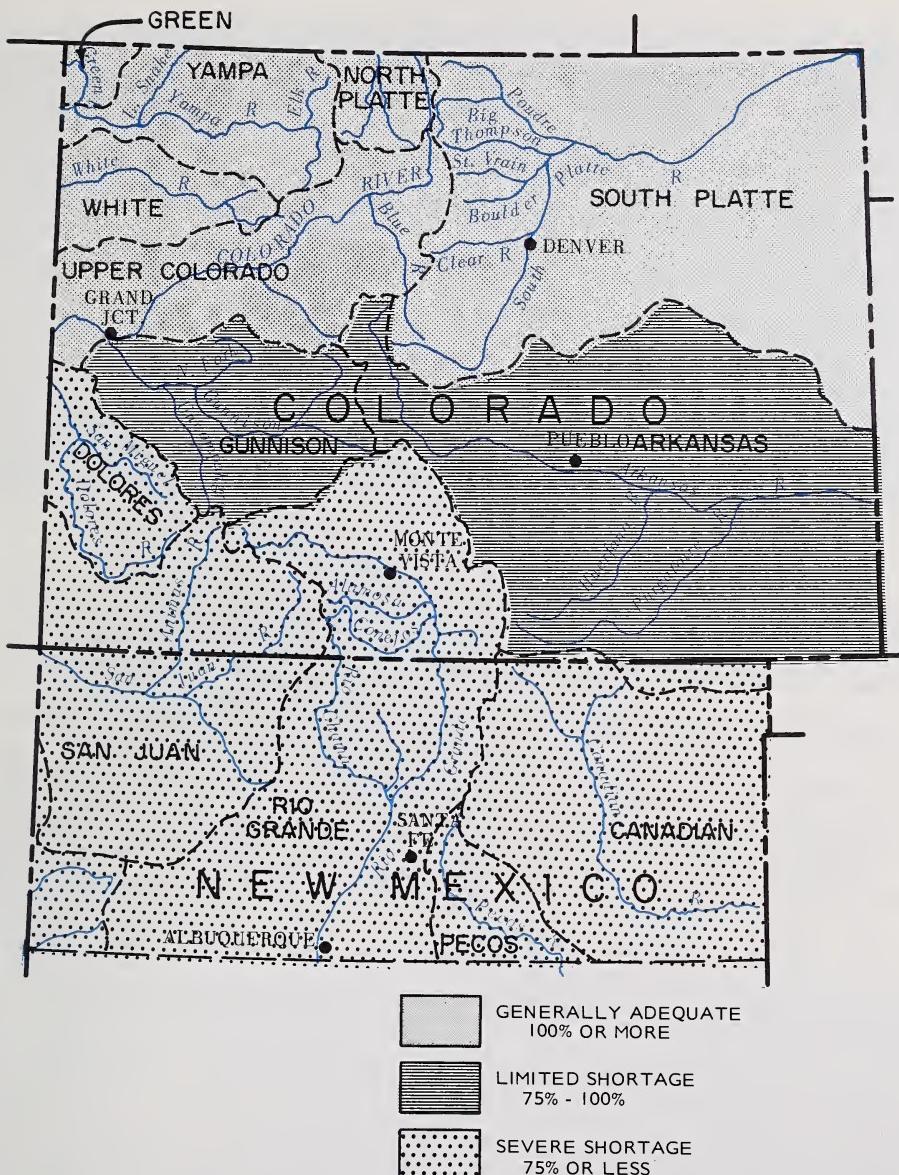
### WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

WATERSHED I	-SOUTH PLATTE RIVER WATERSHED
	Describes water supply conditions in Fort Collins, Big Thompson, Longmont, Boulder Valley, Jefferson, Teller-Park, Douglas County, Morgan, Kiowa, West Arapahoe, West Adams, East Adams, Platte Valley, Southeast Weld, and West Greeley Soil Conservation Districts.
WATERSHED II	-ARKANSAS RIVER WATERSHED
	Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Horse-Rush Creek, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewall, Spanish Peaks, Purgatoire, Branson Trinchera, Western Baca County, Southeastern Baca County, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, West Otero, East Otero, and Big Sandy Soil Conservation Districts.
WATERSHED III	-RIO GRANDE WATERSHED (COLORADO)
	Describes water supply conditions in Rio Grande, Center, Mosca Hooper, Mt. Blanca, Sanchez, and Culebra Soil Conservation Districts.
WATERSHED IV	-RIO GRANDE WATERSHED (NEW MEXICO)
	Describes water supply conditions in Upper Chama, East Rio Arriba, Taos, Lindrith, Jemez, Santa Fe - Pojoaque, Sandoval, Tijeras, Cuba, and Edgewood Soil Conservation Districts.
WATERSHED V	-DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED
	Describes water supply conditions in San Miguel Basin. Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, and Glade Park Soil Conservation Districts.
WATERSHED VI	-GUNNISON RIVER WATERSHED
	Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.
WATERSHED VII	-COLORADO RIVER WATERSHED
	Describes water supply conditions in DeBeque, Lower Grand Valley, Bookcliff, Eagle County, Middle Park, Glade Park, Upper Grand Valley, Plateau Valley, South Side, and Mt. Sopris Soil Conservation Districts.
WATERSHED VIII	-YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED
	Describes water supply conditions in Yampa, Moffat, West Routt, East Routt, North Park, Upper White River, Lower White River, and Douglas Creek Soil Conservation Districts.
WATERSHED IX	-LOWER SOUTH PLATTE RIVER WATERSHED
	Describes water supply conditions in Sedgwick, South Platte, Haxton, Peetz, Padroni, Morgan, Rock Creek, and Yuma Soil Conservation Districts.
APPENDIX I	-SNOW SURVEY MEASUREMENTS
APPENDIX II	-SOIL MOISTURE MEASUREMENTS

# WATER SUPPLY OUTLOOK

as of

April 1, 1971



The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improve. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

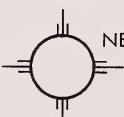
## WATER SUPPLY CONDITIONS

as of  
April 1, 1971

WATER SUPPLIES WILL VARY GREATLY OVER COLORADO AND NEW MEXICO THIS SUMMER. NORTHERN COLORADO SHOULD HAVE EXCELLENT WATER SUPPLIES. FORECASTS ARE 100 TO 130% OF NORMAL. THE MIDDLE AREAS OF COLORADO, THE ARKANSAS, THE COLORADO AND THE GUNNISON RIVERS SHOULD HAVE NEAR NORMAL WATER. THE SOUTHERN PORTION OF COLORADO AND NORTHERN AND CENTRAL NEW MEXICO HAVE VERY POOR WATER PROSPECTS. COLORADO HAS GOOD TO FAIR CARRY-OVER STORAGE. SOILS IN THE IRRIGATED AREAS OF NEW MEXICO ARE REPORTEDLY IN POOR CONDITION. COLORADO REPORTS GOOD CONDITIONS.



COLORADO -- THE SNOW PACK IN NORTHERN COLORADO IS EXCELLENT. SOME SNOW COURSES ARE THE MAXIMUM OF RECORD. BOTH THE EAST AND WEST SLOPES OF NORTHERN COLORADO SHOULD ENJOY ONE OF THE BEST WATER YEARS ON RECORD. THE COLORADO RIVER SHOULD SUPPLY ADEQUATE WATER TO ALL ITS USERS. GENERALLY THE ARKANSAS AND GUNNISON RIVERS SHOULD PRODUCE NEAR NORMAL WATER SUPPLIES. THE SOUTHERN PORTION OF THE STATE, THE RIO GRANDE AND THE SAN JUAN BASINS, CAN PLAN ON A DRY SUMMER. UNLESS SUMMER RAINS ARE PLENTIFUL, WATER SHORTAGES WILL OCCUR. CARRY-OVER STORAGE IS GOOD ESPECIALLY IN THE SOUTH PLATTE BASIN.



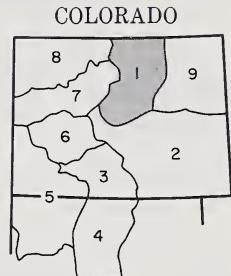
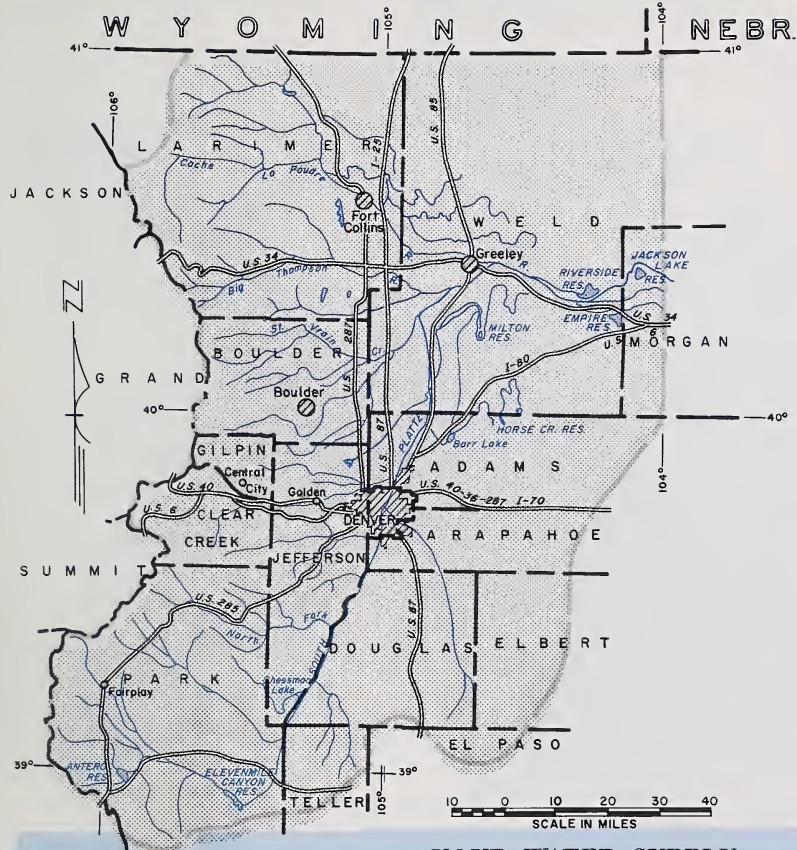
NEW MEXICO -- WATER SUPPLIES THIS SUMMER COULD BE AMONG THE LOWEST ON RECORD. PRACTICALLY NO SNOW IS LEFT IN NEW MEXICO. NEW MEXICO STREAMS ORIGINATING IN COLORADO WILL HAVE A POOR START. ALL FORECASTS ARE WELL BELOW NORMAL. RESERVOIR CARRY-OVER STORAGE IS NEAR NORMAL. UNITS WITH DIRECT FLOW RIGHTS ON NEW MEXICO'S MAJOR STREAMS, AND NO STORAGE WILL HAVE A PARTICULARLY POOR YEAR. THE FLOW PEAKS WILL BE LOW AND LAST ONLY A SHORT PERIOD. LATER SUMMER FLOW WILL BE REDUCED UNLESS SUMMER RAINS ARE BOUNTIFUL.

**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
SOUTH PLATTE RIVER WATERSHED IN COLORADO**

as of

April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



**LEGEND**

———	Highway
~~~~~	Drainage
○	Town
~~~~~	Watershed Boundary
[Solid Box]	Generally Adequate 100% or more
[Horizontal Stripes]	Limited Shortage 75%-100%
[Dotted Box]	Severe Shortage 75% or less

**YOUR WATER SUPPLY**

WATER USERS ON THE UPPER SOUTH PLATTE AND ALL THE NORTHERN TRIBUTARIES SHOULD HAVE ONE OF THE BEST WATER YEARS ON RECORD. ALL STREAMFLOWS ARE BEING FORECASTED ABOVE NORMAL. CARRY-OVER STORAGE IN THE AREA'S MANY RESERVOIRS IS 136% OF THE 15 YEAR AVERAGE. THIS WILL PROVIDE AN EXCELLENT SUPPLEMENTAL SUPPLY. IRRIGATION AUTHORITIES INDICATE VALLEY SOILS ARE IN EXCELLENT CONDITION.

This report prepared by

JACK N. WASCHKEK and RONALD E. MORELANO  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
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Issued by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORE-CAST	% of Average	Average +
Big Thompson at Drake (1)	112	112	100
Boulder at Orodell	60	122	49
Cache La Poudre at Canon Mouth (2)	250	116	215
Clear Creek at Golden (3)	145	122	119
St. Vrain at Lyons (4)	78	111	70

(1) Observed flow plus by-pass to power plants. (2) Observed flow minus trans-basin diversions plus municipal and irrigation diversions. (3) Observed flow minus diversion through August P. Gummick Tunnel. (4) Observed flow plus change in storage in Price Reservoir.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Big Thompson	5	89	120
Boulder	3	75	101
Cache La Poudre	8	90	128
Clear Creek	6	79	110
Saint Vrain	3	74	104
South Platte	3	65	96

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Antero	33.0	15.9	15.9	10.6
Barr Lake	32.2	26.2	27.4	21.1
Black Hollow	8.0	4.4	4.0	3.3
Boyd Lake	44.0	44.8	31.2	27.6
Cache La Poudre	9.5	8.0	8.4	7.5
Carter Lake	108.9	106.4	100.7	81.7
Chambers Lake	8.8	4.5	3.2	3.0
Cheesman	79.0	73.5	79.1	49.0
Cobb Lake	34.3	21.9	18.5	9.9
Eleven Mile	97.8	96.4	96.4	72.1
Fossil Creek	11.6	9.5	10.0	7.0
Gross	43.1	36.7	35.3	22.4
Halligan	6.4	3.3	3.8	4.7

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SOIL CONSERVATION SERVICE  
SNOW SURVEY  
COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO 80521

OFFICIAL BUSINESS

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Bear Creek	Exc.	Exc.
Coal Creek	Exc.	Exc.
North Fork of South Platte	Exc.	Exc.
North Fork of Cache La Poudre	Exc.	Exc.
Ralston Creek	Exc.	Exc.
Rock Creek	Exc.	Exc.

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Horsetooth	143.5	116.5	108.4	106.8
Lake Loveland	14.3	10.9	11.9	8.4
Lone Tree	9.2	8.7	8.0	6.6
Mariano	5.4	5.4	5.1	4.2
Marshall	10.3	7.0	7.5	3.0
Marston	18.0	16.3	16.4	14.7
Milton	24.4	15.9	13.5	10.8
Standley	42.0	31.0	32.6	11.0
Terry Lake	8.2	6.4	.2	5.0
Union	12.7	12.7	12.7	7.6
Windsor	18.6	8.7	13.7	9.9



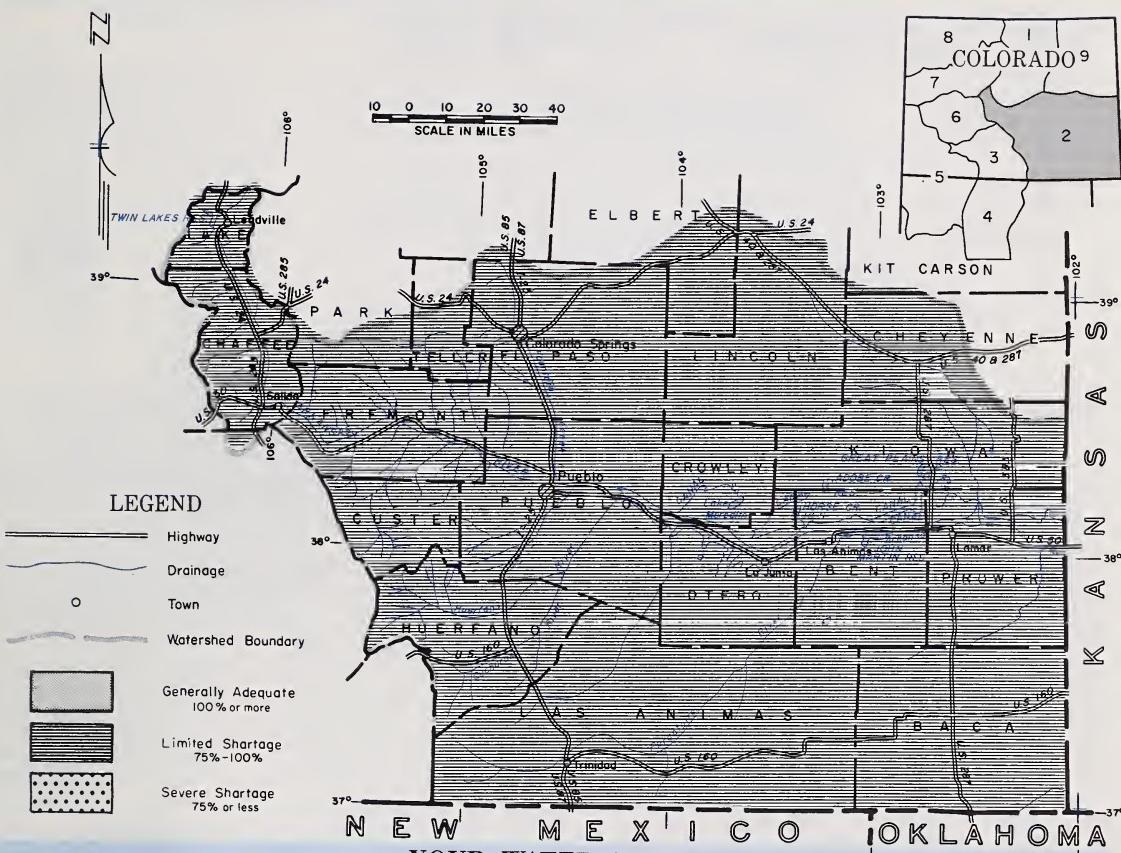
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
ARKANSAS RIVER WATERSHED IN COLORADO**

**as of**  
April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE**  
**COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



## **YOUR WATER SUPPLY**

WATER USERS ON THE ARKANSAS DRAINAGE SHOULD HAVE NEAR NORMAL WATER

SUPPLIES THIS SUMMER. THE SNOW PACK IS NEAR NORMAL ON THE ARKANSAS DRAINAGE. THE SOUTHERN TRIBUTARIES HAVE CONSIDERABLY LESS SNOW, BUT WILL SUPPLY SOME WATER. CARRY-OVER STORAGE IS EXCELLENT. WITH THE EXCEPTION OF JOHN MARTIN, MOST OF THE LARGER RESERVOIRS, CONTAIN CONSIDERABLY MORE WATER THAN NORMAL. VALLEY SOILS CONTAIN FAIR TO GOOD SOIL MOISTURE.

*This report prepared by*

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- SOIL CONSERVATION SERVICE

**The Conservation of Water begins with the Snow Survey**

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORE-CAST	% of Average	Average +
Arkansas nr Pueblo (1)	290	97	298
Arkansas at Salida (1)	300	97	309
Cucharas nr LaVeta	9	75	12
Purgatoire at Trinidad	40	87	46

(1) Observed flow plus change in Clear Creek, Twin Lakes and Turquoise Reservoirs minus diversions through Busk Ivanhoe, Divide, Twin Lakes and Homestake Tunnels and Ewing, Front Pass, Wurtz and Columbine ditches.

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Arkansas	10	78	103
Cucharas and Purgatoire	3	33	39

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Apishapa	Exc.	Avg.
Fountain Creek	Exc.	Avg.
Grape	Exc.	Avg.
Hardscrable Creek	Exc.	Avg.
Huerfano	Exc.	Avg.
Monument Creek	Exc.	Avg.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Arkansas	3	107	99
Cucharas and Purgatoire	1	106	100

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Adobe	61.6	47.5	17.6	11.1
Clear Creek	11.4	6.0	10.4	7.3
Cucharas	40.0		1.7	3.3
Great Plains	150.0	108.6	73.2	38.3
Horse Creek	26.9	9.8	20.1	4.9

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
John Martin	353.9	34.6	50.8	89.4
Meredith	41.9	25.6	24.7	10.0
Model	15.0	1.3	1.1	3.1
Turquoise	130.0	52.4	42.7	7.5
Twin Lakes	57.9	41.5	36.8	19.9

+ 1953-1957 period.

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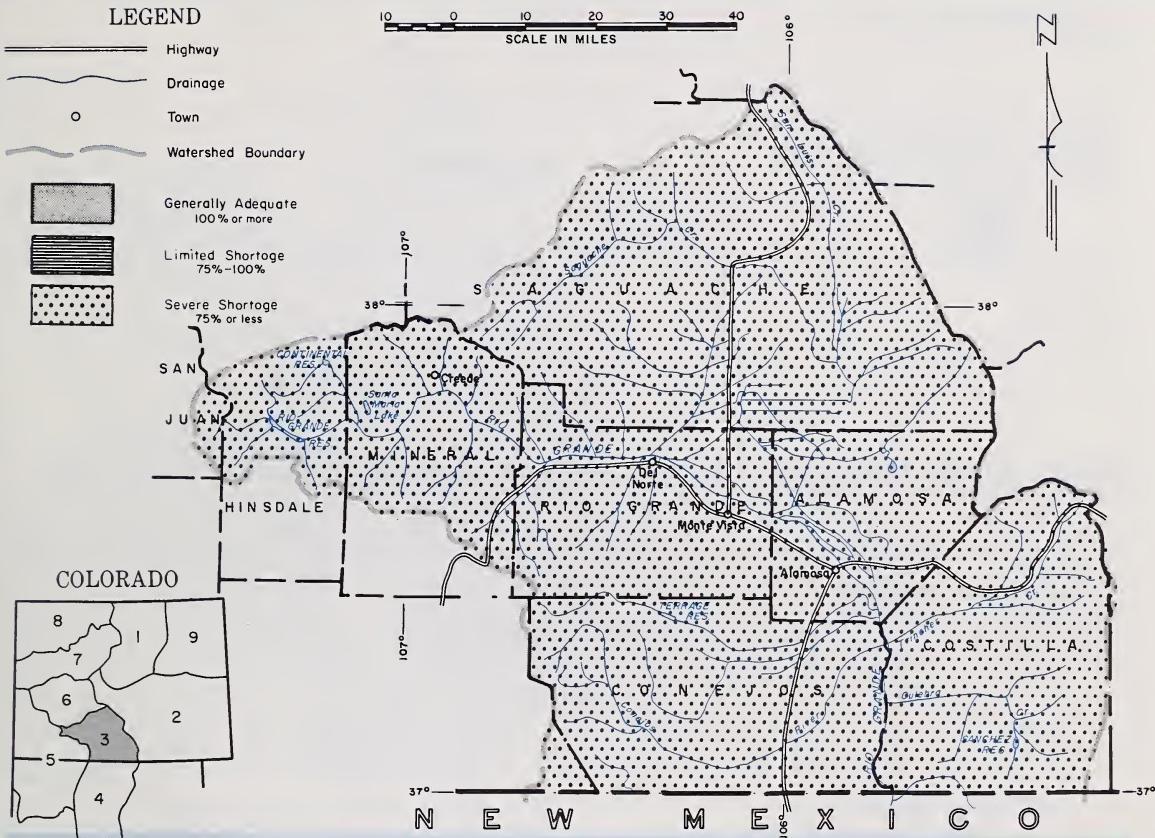
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
UPPER RIO GRANDE WATERSHED IN COLORADO  
as of**

April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



### YOUR WATER SUPPLY

WATER SUPPLY FORECASTS ARE MUCH BELOW NORMAL ON ALL THE RIO GRANDE BASIN. CURRENT SNOW PACK RANGES FROM 46% ON CULEBRA, 51% ON CONEJOS TO 63% ON THE RIO GRANDE AND 72% FOR THE ALAMOSA. MANY SNOW COURSES ARE NEAR THE MINIMUM ON RECORD. RESERVOIR STORAGE IS 179% OF AVERAGE. A COMBINED TOTAL OF SIX RESERVOIRS IS 83,500 ACRE FEET COMPARED TO AN AVERAGE OF 46,700 ACRE FEET. SOIL MOISTURE IN THE MOUNTAIN AREAS IS ABOVE AVERAGE.

This report prepared by

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FORT COLLINS, COLORADO

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DONALD B. TOTTELL--AREA CONSERVATIONIST  
DURANGO, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

# WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

FORECAST POINT	FORE-CAST	% of Average	Average +
Alamosa abv Terrace	40	65	62
Conejos nr Mogote (1)	120	66	182
Culebra at San Luis (2)	15	79	19
Rio Gr. at 30 Mile Bridge (3)	90	77	117
Rio Gr. nr Del Norte (3)	290	66	438
South Fork at South Fork	75	68	110

(1) Observed flow plus change in storage in Platotoro Reservoir. (2) Observed flow plus change in storage in Sanchez Reservoir. (3) Observed flow plus change in storage in Santa Maria, Rio Grande and Continental Reservoirs.

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Alamosa	2	85	72
Conejos	3	68	51
Culebra	2	46	46
Rio Grande	10	76	63

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE AS PERCENT OF:	
		Last Year	Average +
Alamosa	2	143	147
Conejos	1	78	77
Culebra	2	116	96
Rio Grande	3	125	123

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Continental	26.7	10.0	6.6	5.1
Platoro	60.0	2.9	3.0	7.1
Rio Grande	45.8	41.6	28.0	13.3

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Sanchez	103.2	18.0	18.7	11.1
Santa Maria	45.0	11.0	6.7	6.0
Terrace	17.7	0.0	9.9	4.0

+ 1953-1967 period.

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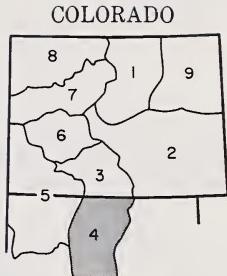
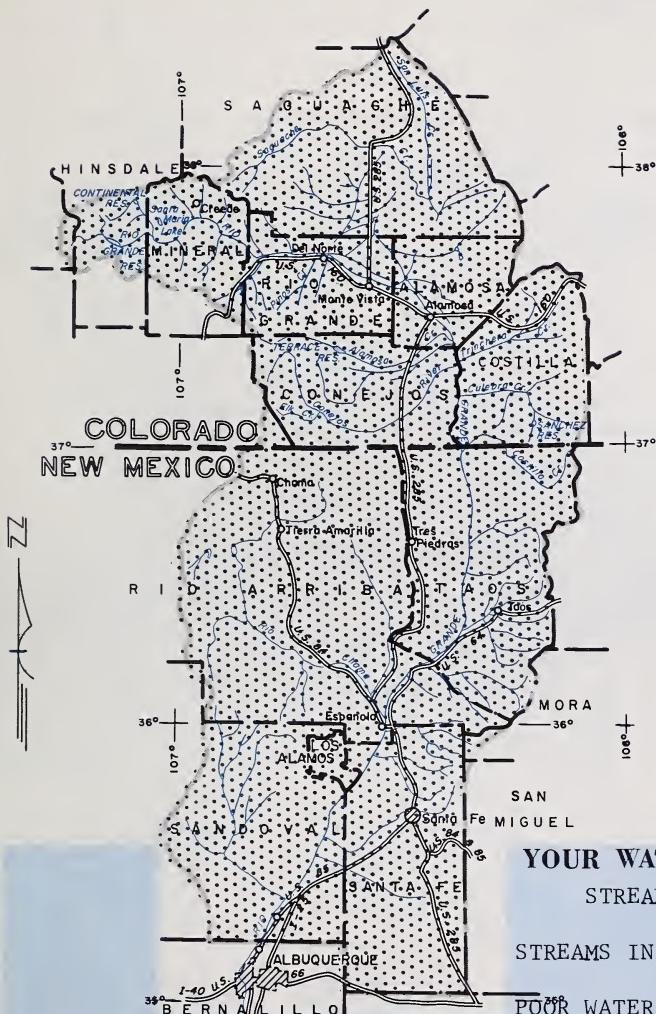
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
RIO GRANDE WATERSHED IN NEW MEXICO**

as of

April 1, 1971

**U.S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
**COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



**LEGEND**

—	Highway
—	Drainage
○	Town
—	Watershed Boundary
[Hatched Box]	Generally Adequate 100% or more
[Horizontal Stripes]	Limited Shortage 75%-100%
[Dotted Box]	Severe Shortage 75% or less

10 0 10 20 30 40  
SCALE IN MILES

**YOUR WATER SUPPLY**

STREAMFLOW FORECASTS OF THE MAJOR

STREAMS IN NEW MEXICO INDICATE A VERY

POOR WATER YEAR IS IN PROSPECT THIS

SUMMER. FORECASTS ARE BASED ON NORMAL PRECIPITATION FOR THE REMAINDER OF THE YEAR. MOST OF THE SNOW SEASON IS PAST AND THE CURRENT SNOW PACK IS ALMOST NON EXISTENT. ONLY VERY HIGH ELEVATIONS HAVE ANY SNOW LEFT.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Mar-Jul

FORECAST POINT	FORE-CAST	% of Average	+ Average
Costilla at Cost. (1)	9	50	18
Pecos at Pecos	20	49	41
Rio Chama to ElVado	110	59	188
Rio Gr. at Otowi (2)	280	55	513
Rio Gr. at San Mar (2)	140	42	334
Rio Hondo nr Valdez	7	47	15
Red R. at mouth nr Questa	20	63	32

The forecast of the Rio Grande at San Marcial is 22% of the Average used by the Elephant Butte Irrigation District. (1) Observed flow plus change in Costilla Reservoir. (2) Observed flow plus change in storage in El Vado and Abiquiu Reservoir.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Pecos	1	0	0
Rio Chama	4	36	29
Rio Grande, N.M.	13	22	20
Rio Hondo	1	11	--
Red River	2	22	19

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Embudo Creek	Poor	Poor
Jemez River	Poor	Poor
Mora River	Poor	Poor
Nambe Creek	Poor	Poor
Rio Ojo Caliente	Poor	Poor
Rio Pueblo de Taos	Poor	Poor
Santa Fe Creek	Poor	Poor

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Pecos	2	126	90
Rio Chama	1	---	90
Rio Grande	4	73	82
Red River			

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Alamorgordo	111	60	85	64
Caballo	344	43	47	65
Conchas	273	153	223	161
Elephant Butte	2195	317	535	334

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
ElVado	195	1	1	6
McMillen-Avalon	32	15	35	22

+ 1953-1967 period.

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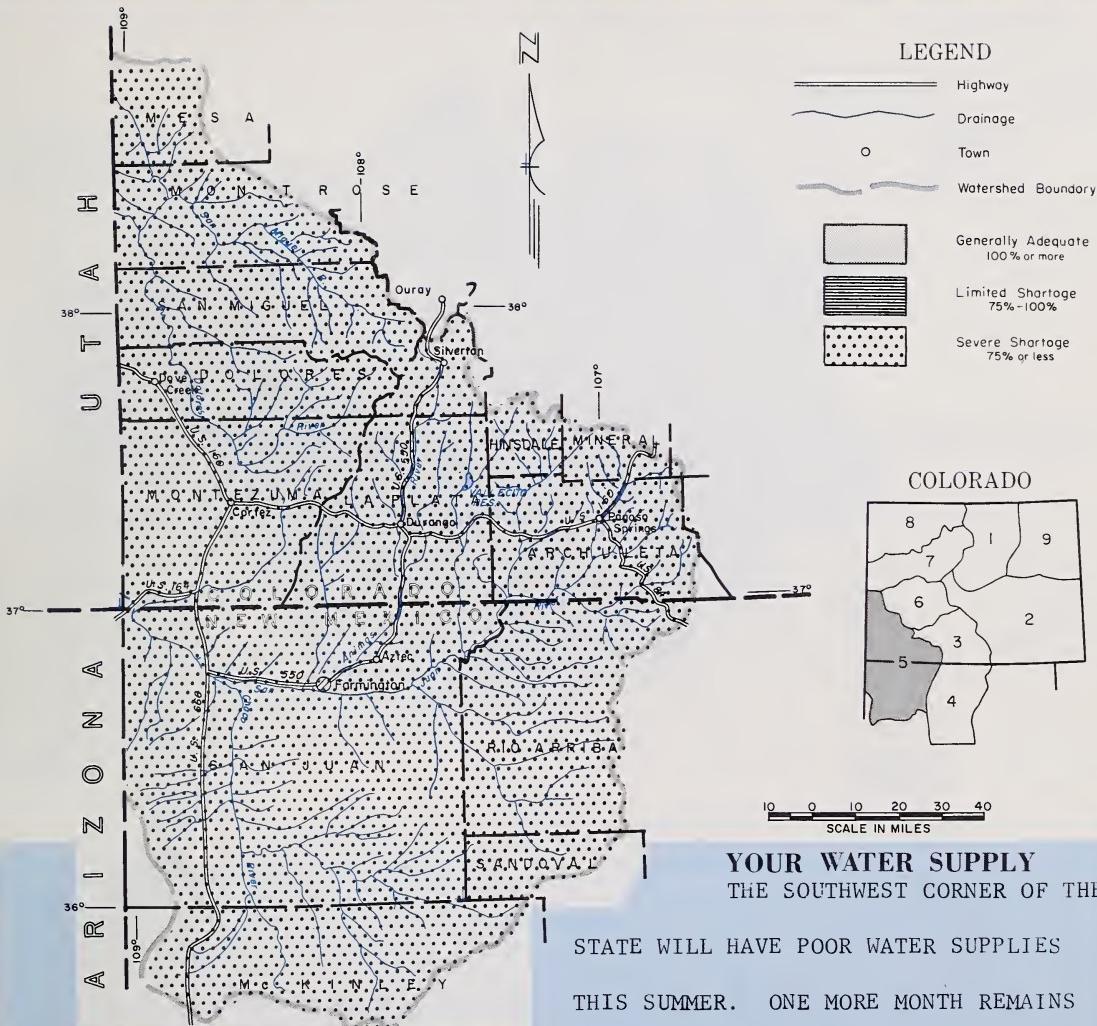
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WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
SAN MIGUEL, DOLORES, ANIMAS, SAN JUAN WATERSHEDS  
IN COLORADO AND NEW MEXICO

as of  
April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



**YOUR WATER SUPPLY**  
THE SOUTHWEST CORNER OF THE

STATE WILL HAVE POOR WATER SUPPLIES  
THIS SUMMER. ONE MORE MONTH REMAINS

TO INCREASE THE SNOW PACK, HOWEVER, IT WOULD HAVE TO BE AN EXTREMELY HIGH SNOW MONTH TO EVEN BRING THE SNOW PACK TO NORMAL. CURRENT SNOW PACK RANGES FROM 58% OF NORMAL ON THE SAN JUAN TO 78% ON THE ANIMAS.

This report prepared by

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SANTA FE, NEW MEXICO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORE-CAST	% of Average	Average +
Animas at Durango	320	78	409
Dolores at Dolores	155	67	231
La Plata at Hesperus	16	67	24
Los Pinos at Bayfield (1)	125	64	194
Piedra Cr. at Piedra	90	55	163
San Juan at Carracas	250	66	379
Inflow to Navajo Res. (1) (Apr-Jul)	370	60	619

(1) Observed flow plus change in storage in Vallecito Reservoir.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Animas	6	82	78
Dolores	4	64	77
San Juan	5	77	58

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Florida	Avg.	Fair
Mancos	Avg.	Fair
San Miguel	Avg.	Fair

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Animas	3	130	94
Dolores	3	111	102
San Juan	2	157	122

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Goundhog	22	14	13	7
Lemon	40	26	30	15
Navajo	1696	834	859	--
Vallecito	126	81	79	50

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +

+ 1953-1967 period.

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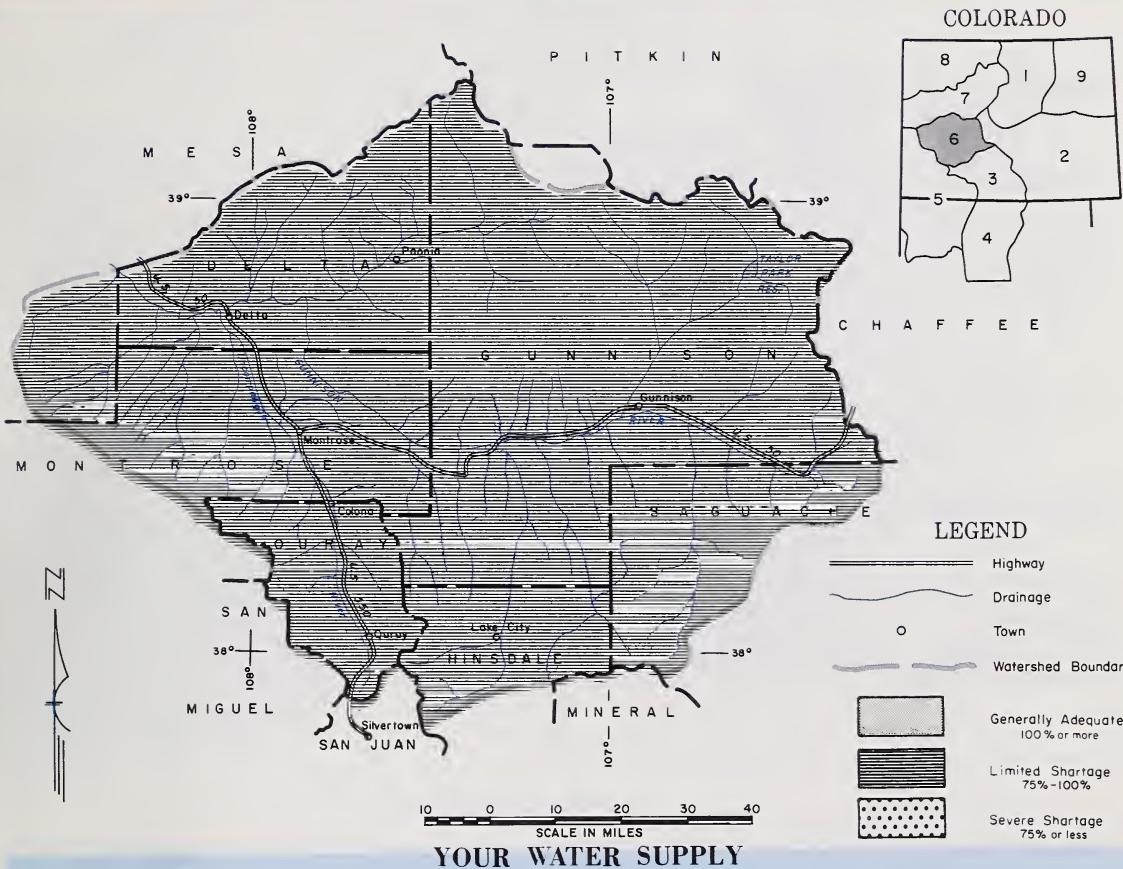
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
GUNNISON RIVER WATERSHED IN COLORADO**  
as of

April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



STREAMFLOW FORECASTS FOR THE GUNNISON RIVER AND ITS TRIBUTARIES ARE SLIGHTLY BELOW THE 1953-67 AVERAGE, RANGING FROM 78% FOR THE UNCOMPAGHRE AND 88% FOR THE GUNNISON TO 94% FOR SURFACE CREEK. THESE ARE ABOUT THE SAME AS LAST MONTH. COMBINED USABLE STORAGE ON BLUE MESA, MORROW POINT AND TAYLOR RESERVOIRS IS 516,000 ACRE FEET. TAYLOR PARK IS 92,000 ACRE FEET OR 159% OF AVERAGE.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

# WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

FORECAST POINT	FORE-CAST	% of Average	Average +
Gunnison Inflow to Blue Mesa	650	85	767
Gunnison nr Grand Junction	1000	88	1137
Surface Cr. nr Cedaridge	15	94	16
Uncompahgre at Colona	100	78	129

(1) Observed flow plus change in storage in Taylor, Blue Mesa and Morrow Point Reservoirs.

## SUMMARY OF SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average +
Gunnison	12	86	96
Surface Creek	3	99	100
Uncompahgre	3	80	86

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Gunnison	1	74	90
Surface Creek	1	130	139
Uncompahgre	1	130	139

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Blue Mesa	830	309	413	--
Morrow Point	121	115	114	--
Taylor	106	92	90	58

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +

+ 1953-1967 period.

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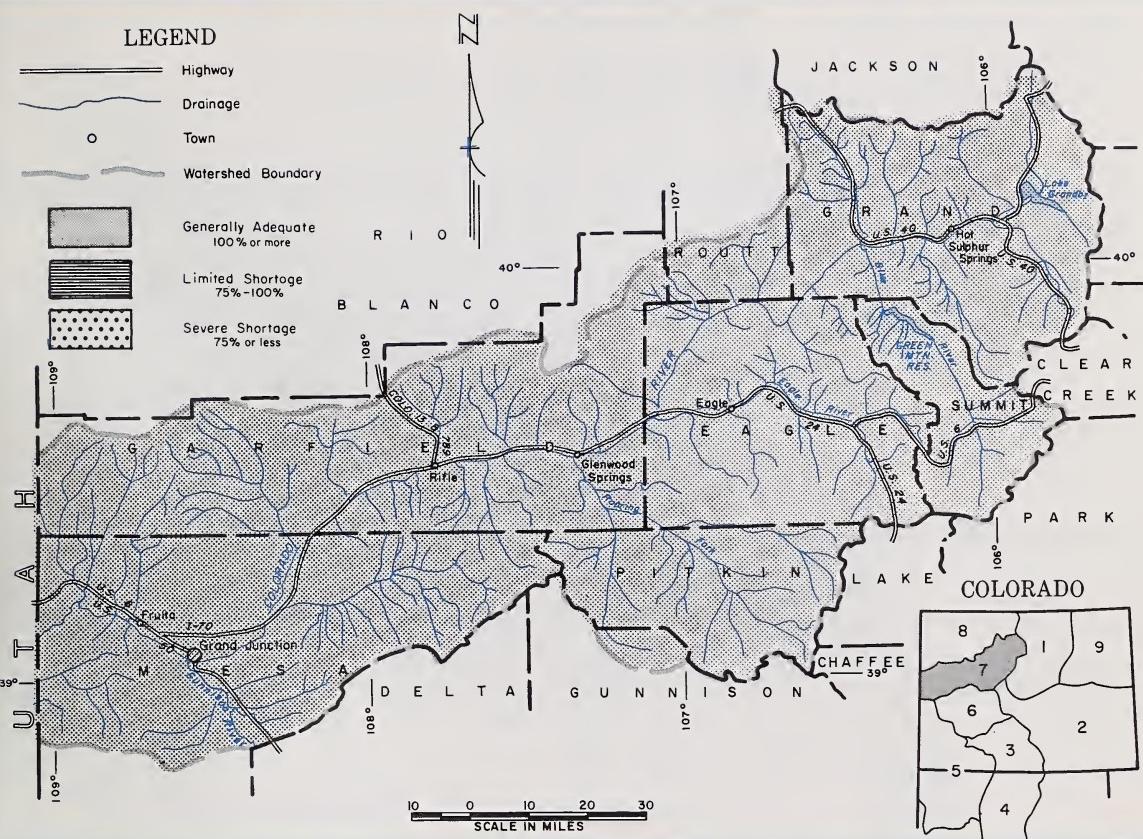
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
COLORADO RIVER WATERSHED IN COLORADO**  
as of

April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
**COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



### YOUR WATER SUPPLY

THE COLORADO RIVER AND ITS TRIBUTARIES ABOVE GLENWOOD SPRINGS SHOULD ALL PROVIDE ADEQUATE WATER SUPPLIES THIS SUMMER. THE SNOW PACK VARIES FROM 103% OF AVERAGE ON PLATEAU CREEK TO 137% ON THE WILLIAMS FORK. FORECASTS FALL IN ABOUT THE SAME RANGE. SOILS IN THE IRRIGATED AREAS ARE REPORTED TO BE IN GOOD CONDITION. CARRY-OVER STORAGE IN THE COLORADO BASIN RESERVOIRS IS EXCELLENT. SOIL MOISTURE CONDITIONS IN THE MOUNTAINS ARE GOOD.

*This report prepared by*

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.)

Apr-Sept

# WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

FORECAST POINT	FORE-CAST	% of Average	Average +
Blue ab Green Mt. (1)	275	117	236
Colo. Rv. inflow to Granby Res. (2)	275	126	219
Colo. Rv. nr Dotsero (3)	1600	116	1375
Roaring Fork at Glenwood Springs (4)	730	105	692
Wm. Fk nr Par. (5)	85	142	60
Will. Cr. inflow to Will. Cr. Res.	60	130	46
Colo. nr Cameo (6)	2480	112	2216

(1) Observed flow plus diversions through Roberts Tunnel and change in storage in Dillon Reservoir. (2) Observed flow corrected for change in storage in Lake Granby as furnished by U.S.B.R. and diversions by Adams Tunnel and Grand River Ditch. (3) Observed flow plus the changes as indicated in (1), (2) and (5) plus Moffat Ditch and change in Homestake, Williams Fork, Green Mt., and Willow Creek Reservoirs. (4) Observed flow plus diversions through Divide and Twin Lakes Tunnels plus change in storage in Ruedi Reservoir. (5) Observed flow plus diversions through August P. Gumlick Tunnel. (6) Observed flow plus the changes as indicated in (3) and (4).

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:		
		Last Year	Average +	
Blue River	8	88	122	
Colorado	21	99	131	
Plateau	3	106	103	
Roaring Fork	7	103	121	
Williams Fork	2	106	137	
Willow	2	88	116	

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Dillon	254	246	239	167
Granby	466	351	240	233
Green Mountain	147	55	50	63
Homestake	43	--	--	--

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Blue River	1	103	129
Colorado	5	116	137
Roaring Fork	1	101	129
Willow	1	109	148

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Ruedi	101	61	69	--
Williams Fork	97	45	42	27
Willow Creek	9	8	8	6
Vega	32	18	15	11

+ 1953-1967 period.

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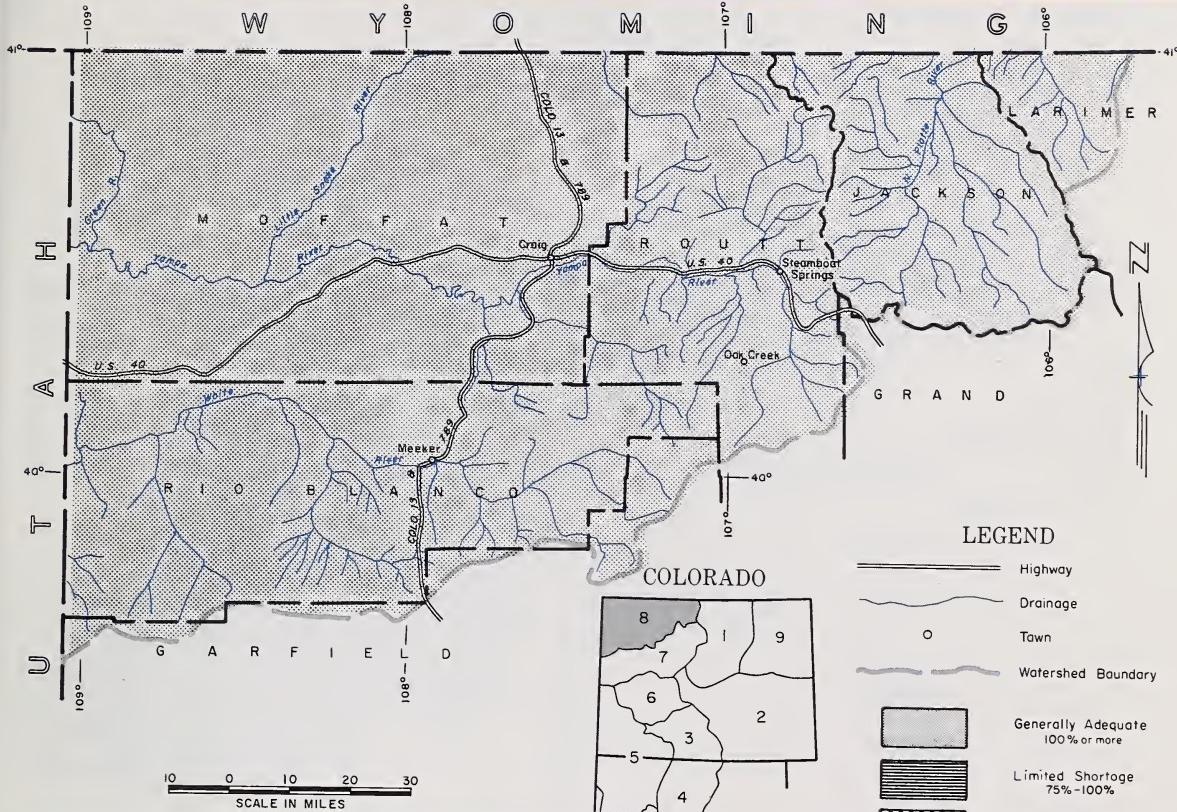
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
YAMPA, WHITE, AND NORTH PLATTE RIVER WATERSHEDS  
IN COLORADO**

April <sup>as of</sup> 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



**YOUR WATER SUPPLY**  
WATER SUPPLIES SHOULD FAR EXCEED DEMANDS IN NORTHWESTERN COLORADO. ALL

STREAMS IN THIS AREA WILL FLOW MUCH ABOVE NORMAL. THE DEEPEST SNOW EVER  
MEASURED ON A REGULAR SNOW COURSE WAS RECORDED THIS YEAR. IT WAS 176 INCHES  
ON ROUND MOUNTAIN SNOW COURSE. MOUNTAIN SOILS ARE CONSIDERABLY WETTER THAN  
NORMAL. VALLEY SOILS ARE IN GOOD CONDITION. FORECASTS ARE BASED ON NORMAL  
PRECIPITATION FOR THE REMAINDER OF THE YEAR.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.)

Apr-Sept

# WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

FORECAST POINT	FORE-CAST	% of Average	Average +
Elk at Clark	235	133	191
Laramie at Jelm	158	152	104
Little Snake at Lily	425	153	277
No. Platte at Northgate	375	174	225
White nr Meeker	355	121	293
Yampa nr Maybell	1130	132	853
Yampa at Steamboat Springs	340	131	260

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Elk	3	104	119
Laramie	3	99	131
North Platte	5	108	136
White	2	110	122
Yampa	6	107	130

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Laramie	2	91	122
North Platte	2	135	131
Yampa	1	100	166

+ 1953-1967 period.

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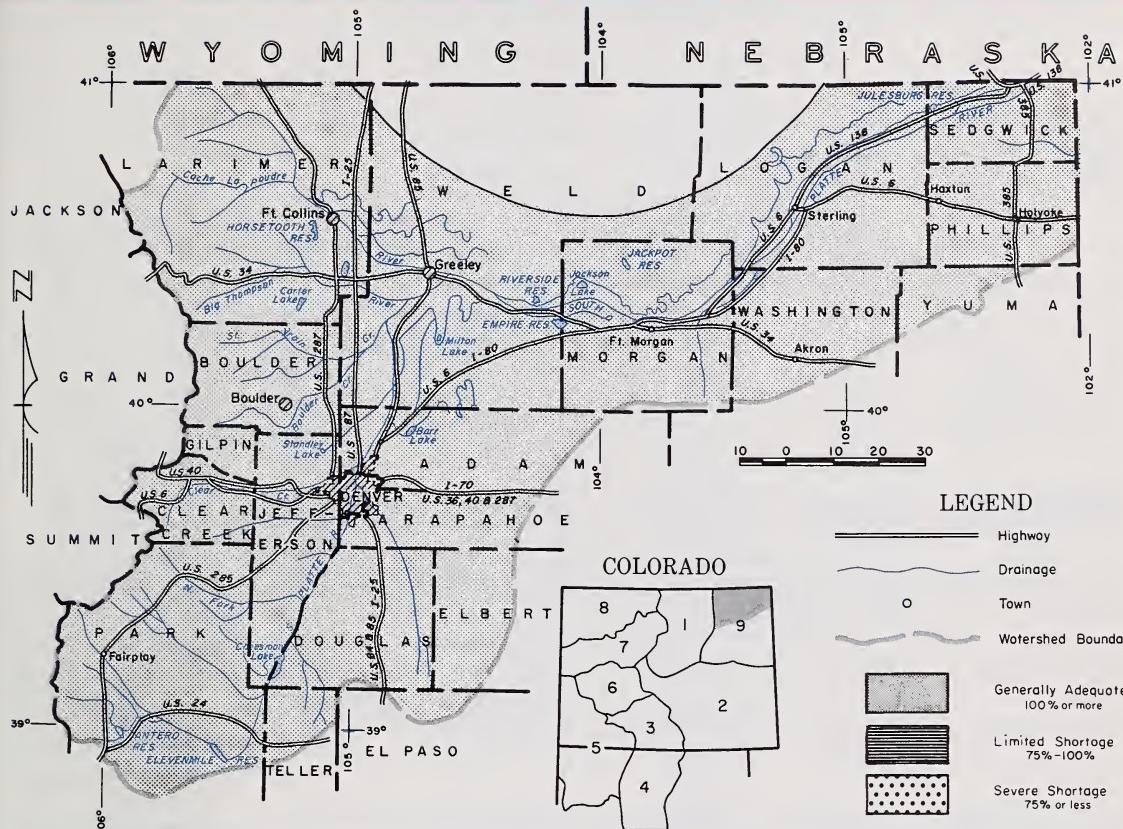
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**WATER SUPPLY OUTLOOK  
FOR THE SOIL CONSERVATION DISTRICTS IN THE  
LOWER SOUTH PLATTE RIVER WATERSHED IN COLORADO**  
**as of**

April 1, 1971

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
**COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO**



### YOUR WATER SUPPLY

WATER SUPPLIES SHOULD BE EXCELLENT ON THE LOWER SOUTH PLATTE THIS SUMMER. THE SNOW PACK IN THE UPPER SOUTH PLATTE AND ALL ITS TRIBUTARIES IS MUCH ABOVE NORMAL. STREAMFLOWS ARE ALL FORECASTED TO FLOW ABOVE NORMAL. CARRY-OVER STORAGE IS NEARLY UP TO CAPACITY AND 123% OF AVERAGE. SOILS IN THE IRRIGATED AREAS ARE REPORTED TO BE IN GOOD CONDITION. FORECASTS ARE BASED ON NORMAL PRECIPITATION FOR THE REMAINDER OF THE YEAR.

This report prepared by

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*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORE-CAST	% of Average	Average +
Big Thompson at Drake (1)	112	112	100
Boulder at Orodell	60	122	49
Cache La Poudre at Canon Mouth	250	116	215
Clear Cr. at Golden (2)	145	122	119
Saint Vrain at Lyons (3)	78	111	70

(1) Observed flow plus by-pass to power plants. (2) Observed flow minus trans-basin diversions plus municipal and irrigation diversions. (3) Observed flow minus diversion through August P. Gummick Tunnel.

## SUMMARY OF SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF		
		Last Year	Average	+
Big Thompson	5	89	120	
Boulder	3	75	101	
Cache La Poudre	8	90	128	
Clear Creek	6	79	110	
Saint Vrain	3	74	104	
South Platte	3	65	96	

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average
Carter	108.9	106.4	100.7	81.7
Cheesman	79.0	73.5	79.1	49.0
Eleven Mile	97.8	96.4	96.4	72.1
Empire	37.7	32.8	34.8	29.6
Horsetooth	143.5	116.5	108.4	106.8

## WATER SUPPLY OUTLOOK

Expressed as Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
South Platte from Greeley to Fort Morgan	Exc.	Exc.
South Platte from Fort Morgan to Sterling	Exc.	Exc.
South Platte below Sterling	Exc.	Exc.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average
Big Thompson	3	89	139
Boulder	1	102	121
Cache La Poudre	2	91	122
Clear Creek	2	92	130
Saint Vrain	2	95	122
South Platte	2	107	122

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average
Jackson	35.4	33.2	32.7	34.0
Julesburg	28.2	19.8	23.2	21.5
Prewitt	32.8	27.7	28.6	16.8
Point of Rocks	70.0	69.2	70.6	58.4
Riverside	57.5	61.9	60.5	49.6

+ 1953-1967 period.

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# APPENDIX I

## SNOW COURSE MEASUREMENTS as of April 1, 1971

SNOW COURSE	CURRENT INFORMATION		PAST RECORD		SNOW COURSE	CURRENT INFORMATION		PAST RECORD			
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	Avg.	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	Avg.	
<b>NORTH PLATTE BASIN</b>											
<u>Laramie River</u>											
Deadman Hill	3/31	63	20.7	22.5	16.3	Blue Lakes	3/30	0	0.0	4.2	2.9
McIntyre	3/26	49	13.4	15.3	10.5	Cucharas Pass	3/30	9	3.9	9.0	- -
Roach	3/27	74	24.8	21.5	18.2	LaVeta Pass (B)	3/30	7	2.4	7.2	7.3
<u>North Platte River</u>						<u>Fugratorie River</u>					
Cameron Pass	3/31	88	38.6	33.1	26.5	Bourbon	3/30	12	3.4	9.0	7.1
Columbine Lodge	3/30	80	31.2	27.8	23.5	<b>RIO GRANDE BASIN-Colo.</b>					
Norhgatne	3/31	26	7.9	8.5	6.2	<u>Alamosa River</u>					
Park View	3/29	40	11.8	11.8	8.6	Silver Lakes	3/31	0	0.0	3.8	5.5
Willow Cr. Pass(B)	3/29	47	15.4	15.9	12.5	Summitville	3/26	55	17.0	16.3	18.1
<b>SOUTH PLATTE BASIN</b>						<u>Conejos River</u>					
<u>Boulder Creek</u>						Cumbres	3/30	28	10.3	13.4	18.6
Baltimore	3/30	21	7.1	12.2	5.9	Platoro	3/31	30	8.5	13.6	16.6
Boulder Falls	3/29	43	14.2	18.4	13.3	River Springs	3/29	6	1.6	3.1	4.8
University Camp	3/29	56	19.1	22.7	20.7	<u>Culebra River</u>					
<u>Big Thompson River</u>						Brown Cabin	4/1	0	0.0	- -	- -
Deer Ridge	3/26	16	4.7	9.4	5.0	Cottonwood (B)	4/1	18	4.8	- -	- -
Hidden Valley	3/29	39	10.6	13.4	11.0	Culebra	3/30	14	4.8	- -	8.4
Lake Irene (B)	3/27	79	27.3	27.4	20.7	LaVeta Pass (B)	3/30	7	2.4	- -	7.3
Long's Peak	3/27	43	13.2	14.3	10.7	Trinchera (B)				- -	- -
Two Mile	3/26	63	18.7	19.6	14.5	<u>Rio Grande</u>					
<u>Cache La Poudre</u>						Cochetopa Pass	3/25	26	6.0	9.6	5.1
Bennett Creek	3/31	32	8.9	12.3	- -	Grayback	3/29	30	11.4	14.0	- -
BigSouth	3/28	2	0.5	2.7	2.4	Hiway	3/30	51	17.9	20.0	26.0
Cameron Pass	3/31	88	38.6	33.1	26.5	Lake Humphrey	3/26	10	3.2	5.1	5.5
Chambers Lake	3/28	33	12.1	14.4	9.1	Love Lake	3/30	11	3.3	8.5	- -
Deadman Hill	3/31	63	20.7	22.5	16.3	Pass Creek	3/30	11	3.9	5.7	11.1
Hour Glass Lake	3/31	27	7.7	11.6	6.8	Pool Table	3/30	7	1.7	4.9	5.9
Joe Wright	3/31	78	29.3	30.1	- -	Porcupine	3/29	26	6.4	9.7	10.1
Lost Lake	3/28	46	16.0	16.9	11.5	Santa Maria	3/29	2	0.5	1.8	3.7
Pine Creek	3/30	2	0.7	3.7	1.9	Upper Rio Grande	3/29	12	4.2	4.3	6.8
Red Feather	3/30	31	7.9	10.9	7.2	Wolf Creek Pass	3/30	40	15.7	20.5	27.0
<u>Clear Creek</u>						Wolf Cr. Sum. (B)	3/30	59	21.6	24.7	28.3
Baltimore (B)	3/30	21	7.1	12.2	5.9	<b>RIO GRANDE BASIN-N.M.</b>					
Berthoud Falls	3/30	54	16.3	20.4	12.9	<u>Pecos River</u>					
Empire	3/30	26	8.5	11.9	7.5	Panchuela	3/27	0	0.0	0.0	1.3
Grizzly Peak (B)	3/30	70	23.9	25.7	17.9	<u>Rio Chama</u>					
Loveland Lift	3/31	53	16.5	24.5	23.4	Bateman	3/27	25	6.4	10.5	11.4
Loveland Pass	3/31	54	19.0	20.7	15.4	Capulin Peak	3/29	0	0.0	3.8	4.0
<u>Saint Vrain River</u>						Chama Divide	3/30	0	0.0	0.0	1.4
Copeland Lake	4/1	11	5.5	7.5	4.4	Chamita	3/30	3	0.7	5.4	7.5
Ward	3/29	24	6.6	9.6	6.7	<u>Rio Grande</u>					
Wild Basin	4/1	41	11.7	15.0	11.8	Aspen Grove	3/29	2	0.5	3.2	3.7
<u>South Platte River</u>						Big Tesuque	3/29	0	0.0	1.3	4.2
Como	3/30	20	6.5	11.0	- -	Blue Bird Mesa	3/28	0	0.0	4.8	3.6
Geneva Park	3/29	10	2.7	7.8	- -	Cordova	3/26	21	5.1	8.8	10.0
Horseshoe Mt.	3/26	42	11.5	12.5	- -	Elk Cabin	3/30	0	0.0	0.8	2.1
Hoosier Pass	3/29	45	11.6	18.0	12.9	Fenton Hill	3/30	0	0.0	3.7	2.7
Jefferson Creek	3/30	31	10.3	12.3	9.2	Pajarito Peak	3/30	0	0.0	0.0	0.3
Mosquito	3/29	31	8.7	13.8	- -	Payrole	3/30	4	1.2	8.4	6.2
Trout Creek Pass	3/26	7	2.2	6.1	- -	Quemazon	3/29	8	2.8	8.6	8.2
<b>ARKANSAS BASIN</b>						Rio En Medio	3/29	6	2.8	6.6	7.7
<u>Arkansas River</u>						Sandoval	3/29	0	0.0	3.9	4.5
Bigelow Divide	3/29	26	7.3	10.5	5.8	Taos Canyon	3/29	0	0.0	2.9	3.5
Cooper Hill (B)	3/31	49	12.2	14.6	10.6	Tres Ritos	3/25	0	0.0	4.0	4.2
East Fork	3/30	35	10.3	13.3	9.6	<u>Rio Hondo</u>					
Four Mile Park	3/29	14	4.7	8.7	4.4	Twining	3/30	3	1.0	8.9	- -
Fremont Pass	3/30	59	19.4	19.9	16.1	<u>Red River</u>					
Garfield	3/29	36	12.4	14.4	13.2	Hematite Park (B)	3/29	0	0.0	3.0	3.5
Hermit Lake	3/29	15	5.4	-	Red River	3/29	5	1.7	4.8	5.5	
Monarch Pass	3/29	47	16.3	20.1	17.3						
Tennessee Pass	3/29	37	10.0	13.9	10.1						
Twins Lakes Tunnel	3/29	39	10.3	11.0	10.7						
Westcliffe	3/29	10	3.3	9.8	5.4						

NOTE: NS - No Survey

(B) - On Adjacent Drainage

# APPENDIX I

**SNOW COURSE MEASUREMENTS as of April 1, 1971**

SNOW COURSE	CURRENT INFORMATION			PAST RECORD			
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	LAST YEAR	AVG.	\$3.67
<b>SAN JUAN-DOLORES BASIN</b>							
<u>Animas River</u>							
Cascade	3/29	13	4.2	7.3	10.8		
Lemon	3/30	3	1.0	4.6	- -		
Mineral Creek	3/29	38	12.5	15.8	13.3		
Molas Lake	3/29	30	9.7	11.7	12.6		
Purgatory	3/29	37	12.0	18.5	- -		
Red Mt. Pass (B)	3/29	76	29.1	31.5	30.1		
Silverton Sub-Sta.	3/29	6	2.4	5.3	5.1		
Spud Mountain	3/29	47	16.4	18.6	23.1		
<u>Dolores River</u>							
Lizard Head	3/30	40	13.2	16.4	16.0		
Lone Cone	3/29	38	13.4	16.7	- -		
Rico	3/30	0	0.0	7.5	5.4		
Telluride	3/30	15	5.6	10.2	5.7		
Trout Lake	3/30	35	12.4	14.9	13.2		
<u>San Juan River</u>							
Chama Divide (B)	3/30	0	0.0	0.0	1.4		
Chamita (B)	3/30	3	0.7	5.4	7.5		
Upper San Juan	3/30	43	17.5	21.1	30.8		
Wolf Cr. Pass (B)	3/30	40	15.7	20.5	27.0		
Wolf Cr. Summit	3/30	59	21.6	24.7	28.3		
<b>GUNNISON BASIN</b>							
<u>Gunnison River</u>							
Alexander Lake	3/31	58	21.3	23.6	21.4		
Blue Mesa	3/30	17	5.1	10.6	7.9		
Butte	3/29	48	14.7	17.5	- -		
Cochetopa Pass (B)	3/25	26	6.0	9.6	5.1		
Crested Butte	3/31	35	9.7	13.1	13.3		
Keystone	3/31	58	20.4	21.5	19.7		
Lake City	3/26	28	7.2	9.4	7.7		
Mesa Lakes (B)	3/29	52	17.5	18.0	17.5		
McClure Pass	3/29	42	15.3	17.3	14.6		
Park Cone	3/30	34	9.1	13.3	10.9		
Park Reservoir	3/29	63	23.6	21.5	23.6		
Porphyry Creek	3/29	51	16.6	18.8	16.9		
Tomichi	3/29	40	12.9	14.5	12.2		
<u>Surface Creek</u>							
Alexander Lake	3/31	58	21.3	23.6	21.4		
Mesa Lakes (B)	3/29	52	17.5	18.0	17.5		
Park Reservoir	3/29	63	23.6	21.5	23.6		
<u>Uncompahgre River</u>							
Ironton Park	3/30	36	11.7	16.6	17.9		
Red Mountain Pass	3/29	76	29.1	31.5	30.1		
Telluride (B)	3/30	15	5.6	10.2	5.7		
<b>COLORADO BASIN</b>							
<u>Blue River</u>							
Blue River	3/29	33	8.6	12.5	8.5		
Fremont Pass	3/30	59	19.4	19.9	16.1		
Frisco	3/30	27	8.8	10.6	7.5		
Grizzly Peak	3/30	70	23.9	25.7	17.9		
Hoosier Pass (B)	3/29	45	11.6	18.0	12.9		
Shrine Pass	3/30	67	23.6	23.7	17.4		
Snake River	3/30	36	10.9	12.4	7.6		
Summit Ranch	3/30	30	9.3	9.6	7.1		
<b>Colorado River</b>							
Arrow	3/30	49		18.7	12.1	11.8	
Berthoud Pass	3/29	60		21.6	20.3	14.5	
Berthoud Summit	3/30	69		21.4	23.6	19.3	
Cooper Hill	3/31	49		12.2	14.6	10.6	
Fiddler Gulch	3/29	54		15.0	18.4	15.1	
Glenmar Ranch	3/30	37		10.3	9.9	7.9	
Gore Pass	3/29	40		12.5	13.3	10.0	
Grand Lake	3/28	34		9.3	10.5	8.2	
Lake Irene	3/27	79		27.3	27.4	20.7	
Lapland	3/25	53		15.9	13.6	9.9	
Lulu	3/30	75		25.9	27.4	17.0	
Lynx Pass	3/29	50		16.2	15.7	12.0	
McKenzie Gulch	3/29	21		5.7	5.7	- -	
Middle Fork	3/30	40		13.0	12.0	9.1	
Milner	3/27	56		17.4	18.5	13.3	
North Inlet	3/28	34		10.3	11.2	8.7	
Pando	3/30	36		11.3	12.2	10.4	
Phantom Valley	3/27	44		13.9	14.9	10.4	
Ranch Creek	3/30	45		14.5	13.7	9.4	
Tennessee Pass (B)	3/29	37		10.0	13.9	10.1	
Vail Pass	3/30	62		22.5	22.2	17.1	
Vasquez	3/26	59		18.3	16.7	12.4	
<u>Roaring Fork River</u>							
Aspen	3/29	70		24.9	18.0	16.4	
Chapman	3/29	56		18.1	17.4	- -	
Independence Pass	3/29	65		20.2	23.2	17.7	
Ivanhoe	3/30	65		23.0	23.3	17.9	
Kilm	3/30	48		15.2	14.1	- -	
Last Chance	3/30	40		13.3	11.8	- -	
Lift	3/29	65		20.7	17.5	19.0	
McClure Pass	3/29	42		15.3	17.3	14.6	
Nast	3/30	25		7.8	8.0	5.3	
North Lost Trail	3/29	44		15.2	16.6	14.1	
<u>Williams Fork River</u>							
Glenmar Ranch	3/30	37		10.3	9.9	7.9	
Jones Pass	3/29	64		22.3	13.6	- -	
Middle Fork	3/30	40		13.0	12.0	9.1	
<u>Willow Creek</u>							
Granby	3/29	26		7.7	10.4	7.5	
Willow Cr. Pass	3/29	47		15.4	15.9	12.5	
<u>Plateau Creek</u>							
Mesa Lakes	3/29	52		17.5	18.0	17.5	
Park Reservoir	3/29	63		23.6	21.5	23.6	
Trickle Divide	3/29	69		27.0	24.6	25.2	
<b>YAMPA BASIN</b>							
<u>Elk River</u>							
Clark	3/31	29		9.0	10.6	10.0	
Elk River	3/31	62		22.7	20.2	16.8	
Hahn's Peak	3/31	47		15.7	14.9	12.9	
<u>White River</u>							
Burro Mountain	3/30	60		22.6	20.0	17.0	
Rio Blanco	3/29	51		17.5	16.6	15.8	
<u>Yampa River</u>							
Bear River	3/26	51		13.4	15.1	11.1	
Columbine (B)	3/30	80		31.2	27.8	23.5	
Dry Lake	3/30	65		22.4	20.8	19.9	
Lynx Pass (B)	3/29	50		16.2	15.7	12.0	
Rabbit Ears	3/30	96		35.7	31.8	25.7	
Yampa View	3/30	52		19.8	18.1	14.3	

NOTE:

NS - No Survey

(B) - On Adjacent Drainage

## APPENDIX II

### SOIL MOISTURE MEASUREMENTS as of April 1, 1971

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
<b>NORTH PLATTE BASIN</b>					
<u>North Platte River</u>					
Muddy Pass	3/31/71	11.1	7.3	4.8	6.4
Willow Pass	3/29/71	9.5	9.3	8.5	6.3
<b>SOUTH PLATTE BASIN</b>					
<u>Boulder Creek</u>					
Alpine Camp	3/29/71	6.9	4.1		3.4
<u>Big Thompson River</u>					
Beaver Dam	3/27/71	7.1	4.1		3.3
Guard Station	3/27/71	6.9	--	3.2	3.6
Two Mile	3/27/71	4.9	4.7		2.6
<u>Clear Creek</u>					
Clear Creek	3/31/71	9.5	6.6	7.2	5.0
Hoop Creek	3/29/71	4.9	3.3		2.6
<u>Cache La Poudre River</u>					
Feather	3/31/71	10.1	5.3	7.3	4.0
Laramie Road	3/28/71	12.4	7.9	7.2	6.8
<u>South Platte River</u>					
Hoosier Pass	3/29/71	7.8	4.3	4.9	4.3
Kenosha Pass	3/30/71	4.4	2.9	2.3	2.0
<b>ARKANSAS BASIN</b>					
<u>Arkansas River</u>					
Garfield	3/29/71	6.7	4.6	4.1	3.5
Leadville	3/30/71	7.8	3.2	3.1	3.7
Twin Lakes Tunnel	3/30/71	4.5	1.8	1.8	2.5
<b>RIO GRANDE BASIN - COLORADO</b>					
<u>Conejos River</u>					
Mogote	3/25/71	10.7	4.6	5.9	6.0
<u>Rio Grande</u>					
Alberta Park	3/29/71	8.2	6.8	5.1	4.7
Bristol View	3/31/71	6.1	5.1	3.2	3.4
LaVeta Pass	3/25/71	11.9	8.7	8.2	8.7
<b>RIO GRANDE BASIN - NEW MEXICO</b>					
<u>Rio Chama</u>					
Bateman	3/27/71	6.7	1.9	2.5	3.2
Chamita	3/30/71	8.0	4.7		4.1
<u>Rio Grande</u>					
Aqua Piedra	3/29/71	7.2	3.9	5.6	3.7
Big Tesuque	3/29/71	3.7	0.9	1.9	1.9
Fenton Hill	NS	6.5			5.1
Rio En Medio	3/29/71	3.5	0.4	1.4	1.2
Taos Canyon	3/29/71	3.3	2.3	2.4	2.3
<u>Red River</u>					
Red Summit	3/29/71	4.9	1.5	0.6	1.9
<b>ANIMAS-SAN JUAN BASINS</b>					
<u>Animas River</u>					
Cascade	3/29/71	9.1	6.4	3.9	6.9
Mineral Creek	3/29/71	5.7	4.1	2.6	3.5
Molas Lake	3/29/71	9.4	3.4	4.2	4.4
<u>Dolores River</u>					
Dolores	3/30/71	19.6	8.4	7.8	8.0
Lizard Head	3/30/71	11.8	5.0	3.4	7.1
Rico	3/30/71	13.8	10.5	10.4	8.3

## APPENDIX II

### SOIL MOISTURE MEASUREMENTS as of April 1, 1971

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
GUNNISON BASIN					
<u>Gunnison River</u>					
King	3/29/71	3.3	1.7	2.3	1.9
COLORADO BASIN (MAINSTEM)					
<u>Blue River</u>					
Blue River	3/29/71	4.2	3.1	3.0	2.4
<u>Colorado River</u>					
Berthoud Pass	3/29/71	3.9	3.1	3.2	2.5
Gore	3/29/71	4.9	3.5	3.3	2.6
Grand Mesa	3/29/71	12.5	12.5	9.6	9.0
Ranch Creek	3/30/71	8.7	5.9	6.1	5.3
Vail	3/30/71	12.3	10.5	8.4	6.5
<u>Roaring Fork River</u>					
Placita	3/31/71	9.3	8.4	8.3	6.5
YAMPA BASIN					
<u>Yampa River</u>					
Hahn's Peak	3/31/71	19.0	19.0	5.9	11.4

# LIST of COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Platte, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

## STATE

Colorado State Engineer  
New Mexico State Engineer  
Nebraska State Engineer  
Colorado Experiment Station  
Rocky Mountain Forest and Range Experiment Station

## FEDERAL

Department of Agriculture

Forest Service  
Soil Conservation Service

Department of Interior

Bureau of Reclamation  
Geological Survey  
National Park Service  
Indian Service

Department of Commerce

Weather Bureau

War Department

Army Engineer Corps

Atomic Energy Commission

## INVESTOR OWNED UTILITIES

Colorado Public Service Company  
Public Service Company of New Mexico

## MUNICIPALITIES

City of Denver              City of Greeley  
City of Boulder              City of Fort Collins

## WATER USERS ORGANIZATIONS

Arkansas Valley Ditch Association  
Colorado River Water Conservation District

## IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company  
San Luis Valley Irrigation District  
Santa Maria Reservoir Company  
Costilla Land Company  
Uncompahgre Valley Water Users' Association  
Twin Lakes Reservoir and Canal Company  
Trinchera Irrigation Co.

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
Snow Survey Unit  
COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO 80521  
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with the Snow Survey"*